Current Pending Claims for Application No. 10/562,840

1. -36. (Cancelled)

37. (Proposed amendment) A method for analyzing nucleotide sequences ~~variations~~, comprising:

forming microemulsions comprising one or more species of analyte DNA molecules;

amplifying analyte DNA molecules in the microemulsions in the presence of reagent beads, wherein the reagent beads are bound to a plurality of molecules of a primer for amplifying the analyte DNA molecules, whereby product beads are formed which are bound to a plurality of copies of one species of analyte DNA molecule;

separating the product beads from analyte DNA molecules which are not bound to product beads;

determining a sequence feature of the one species of analyte DNA molecule which is bound to the product beads by flow cytometry~~:~~

~~isolating using fluorescence activated cell sorting product beads which are bound to a plurality of copies of a first species of analyte DNA molecule from product beads which are bound to a plurality of copies of a second species of analyte DNA molecule.~~

38. (Cancelled)

39. (Proposed amendment) A method for analyzing nucleotide sequences ~~variations~~ s, comprising:

forming microemulsions comprising one or more species of analyte DNA molecules;

amplifying analyte DNA molecules in the microemulsions in the presence of reagent beads, wherein the reagent beads are bound to a plurality of molecules of a primer for amplifying the analyte DNA molecules, whereby product beads are formed which are bound to a plurality of copies of one species of analyte DNA molecule;

separating the product beads from analyte DNA molecules which are not

bound to product beads;

determining a sequence feature of the one species of analyte DNA molecule which is bound to the product beads;

isolating product beads which are bound to a plurality of copies of ~~a first~~ the one species of analyte DNA ~~molecule from product beads which are bound to a plurality of copies of a second species of analyte DNA molecule~~;

amplifying the ~~first~~ one species of analyte DNA molecule from the isolated product beads.

40. (Cancelled)

41. (Cancelled)

42. (Cancelled)

43. (Proposed amendment) A method for analyzing nucleotide sequences ~~variations~~, comprising:

forming microemulsions comprising one or more species of analyte DNA molecules;

amplifying analyte DNA molecules in the microemulsions in the presence of reagent beads, wherein the reagent beads are bound to a plurality of molecules of a primer for amplifying the analyte DNA molecules, whereby product beads are formed which are bound to a plurality of copies of one species of analyte DNA molecule;

separating the product beads from analyte DNA molecules which are not bound to product beads;

determining a sequence feature of the one species of analyte DNA molecule which is bound to the product beads by hybridization to oligonucleotide probes which are differentially labeled.

44. (Proposed amendment) A method for analyzing nucleotide sequences ~~variations~~, comprising:

forming microemulsions comprising ~~one or~~ more than one species of analyte DNA molecules;

amplifying analyte DNA molecules in the microemulsions in the presence of reagent beads, wherein the reagent beads are bound to a plurality of molecules

of a primer for amplifying the analyte DNA molecules, whereby product beads are formed which are bound to a plurality of copies of one species of analyte DNA molecule;

separating the product beads from analyte DNA molecules which are not bound to product beads;

determining ~~relative or absolute~~ and comparing amounts of product beads comprising ~~one or more sequence features~~ a first species of analyte DNA molecule to product beads comprising a second species of analyte DNA.

Comment [s1]: Specification at page 13, lines 1-4 and page 23, lines 13-17

45. (Proposed amendment) The method of claim 44 wherein the ~~relative or absolute~~ amounts are determined using flow cytometry.

46. -59. (Cancelled)

60. (Proposed amendment) A method for isolating nucleotide sequences ~~variations~~, comprising:

forming microemulsions comprising ~~one or~~ more than one species of analyte DNA molecules;

amplifying analyte DNA molecules in the microemulsions in the presence of reagent beads, wherein the reagent beads are bound to a plurality of molecules of a primer for amplifying the analyte DNA molecules, whereby product beads are formed which are bound to a plurality of copies of one species of analyte DNA molecule;

separating the product beads from analyte DNA molecules which are not bound to product beads;

isolating using fluorescence activated cell sorting product beads which are bound to a plurality of copies of a first species of analyte DNA molecule from product beads which are bound to a plurality of copies of a second species of analyte DNA molecule.

61. (Cancelled)

62. (Proposed amendment) A method for isolating nucleotide sequences ~~variations~~, comprising:

forming microemulsions comprising ~~one or~~ more than one species of analyte DNA molecules;

amplifying analyte DNA molecules in the microemulsions in the presence of reagent beads, wherein the reagent beads are bound to a plurality of molecules of a primer for amplifying the analyte DNA molecules, whereby product beads are formed which are bound to a plurality of copies of one species of analyte DNA molecule;

separating the product beads from analyte DNA molecules which are not bound to product beads;

isolating product beads which are bound to a plurality of copies of a first species of analyte DNA molecule from product beads which are bound to a plurality of copies of a second species of analyte DNA molecule;

amplifying the first species of analyte DNA molecule from the isolated product beads.

63. -84. (Cancelled)

85. (New) A method for analyzing nucleotide sequences, comprising:

Comment [s2]: Same as allowed claim 43 but with alternate means of determining a sequence feature in the last step.

forming microemulsions comprising one or more species of analyte DNA molecules;

amplifying analyte DNA molecules in the microemulsions in the presence of reagent beads, wherein the reagent beads are bound to a plurality of molecules of a primer for amplifying the analyte DNA molecules, whereby product beads are formed which are bound to a plurality of copies of one species of analyte DNA molecule;

separating the product beads from analyte DNA molecules which are not bound to product beads;

determining a sequence feature of the one species of analyte DNA molecule which is bound to the product beads by primer extension.

Comment [s3]: Specificaiton at page 9, last line.

86. (New) The method of claim 37 wherein the microemulsions comprise more than one species of analyte DNA molecules, said method further comprising:

isolating using fluorescence activated cell sorting product beads which are bound to a plurality of copies of a first species of analyte DNA molecule from product beads which are bound to a plurality of copies of a second species of

analyte DNA molecule.

Comment [s4]: This step was formerly last step of claim 37.